

Name: _____

Date:

Obj:

Do Now:

1. The population of people on Mars will be four in 2030 and will increase by 1.3% annually. What will the population of people on Mars be in 2050? Round to the nearest whole number.

2. Simplify: $(4x^2y^5z^{-10})(2x^5y^0z^{12})$

Name: _____ **Exponential Decay**

Notes

Formula:

$a =$ _____ amount

$b =$ _____ factor (must be between _____ and _____)

$x =$ # of _____ periods

Two Main Types of _____ Decay:

1. _____: b is ALWAYS _____

2. _____: $b =$ _____ - _____ Percentage.

Then change to a _____!

Examples:

Ex 1: The half-life of carbon-14 is 5,700 years. If there are 400 atoms of carbon in a fossil today, how many atoms will be present in 39,900 years?

Ex 2: The thickness of the ice in Arctic regions is causing the population of polar bears to decrease at an annual rate of 4.2%. If there are 22,193 polar bears currently in the wild today, approximately how many polar bears will be in the wild in 2024? Round to the nearest polar bear.

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